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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,707	09/09/2003	Ioan Dorin Ilea	31727-2019	8746

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EXAMINER

BOSWELL, CHRISTOPHER J

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/657,707	Applicant(s) ILEA ET AL.	
	Examiner Christopher Boswell	Art Unit 3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-8 and 10-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-8,10-13,20-40,43 and 44 is/are rejected.
- 7) ☒ Claim(s) 16-19,41 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 20, 24, 25 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application Publication Number 2002/0096889 to Nelsen et al.

Nelsen et al. disclose a device for releasing a latch comprising a housing (27, figure 6), an electric motor (5a) mounted in the housing, a worm (5b) operatively coupled to the motor for driving rotation of the worm about an axis in a first rotational direction, a worm gear (5c), in meshing engagement with the worm and being mounted in the housing for rotation about an axis substantially orthogonal to the worm axis (figure 1), a camshaft (shaft at figure 11; figure 1) mounted on the worm gear and having a rotation axis coincident with the gear axis, the camshaft having a distal end extending to the exterior of the housing, a cam (15) affixed at the exterior end of the camshaft having a surface for engaging the latch to move the latch from a closed position to a release position as the gear rotates in a first direction from a first position to a second position under control of the motor, and a spring (8) connected between the gear and the housing so as to bias the worm gear against rotation from the first position to the second position and such that energy is transferred from the motor to the spring as the gear rotates from the first position to the second position under control of the motor and, when the motor is powered down,

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the energy stored in the spring causes the gear to rotate in a second direction, opposite to the first direction, from the second position to the first position (paragraph 11), as in claim 24.

Nelsen et al. also disclose a cross-section of the camshaft and the aperture are noncircular (figure 1), the cross-sections of the camshaft and the aperture orienting the cam for operation between the open and close positions, as in claim 20, and the worm gear having a shaft (10) rotatably mounted to the housing, and an outer rim (6) spaced from the shaft, the rim bearing teeth in the meshing engagement with the worm, as in claim 25, as well as the spring is a helical spring located between the tubular mount and the rim on the worm gear (figure 2), as in claim 36.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-8, 10-13, 15, 21-23, 26-35, 37-40 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelsen et al., in view of U.S. Patent Number 6,698,805 to Erices et al.

Nelsen et al. discloses the invention substantially as claimed. Nelsen et al. disclose a device for releasing a latch comprising a housing (27, figure 6), an electric motor (5a) mounted in the housing, a worm (5b) operatively coupled to the motor for driving rotation of the worm about an axis in a first rotational direction, a worm gear (5c), in meshing engagement with the

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worm and rotatably mounted to the tubular mount, and being mounted in the housing for rotation about an axis substantially orthogonal to the worm axis (figure 1), a camshaft (shaft at figure 11; figure 1) mounted on the worm gear and having a rotation axis coincident with the gear axis, the camshaft having a distal end extending to the exterior of the housing, a cam (15) affixed at the exterior end of the camshaft having a surface for engaging the latch to move the latch from a closed position to a release position as the gear rotates in a first direction from a first position to a second position under control of the motor, and wherein the worm gear is biased against the rotation from the first position to the second position by a spring (8) connected between the gear and the housing such that energy is transferred from the motor to the spring as the gear rotates from the first position to the second position under control of the motor and, when the motor is powered down, the energy stored in the spring causes the gear to rotate in a second direction, opposite to the first direction, from the second position to the first position (paragraph 11), as in claim 1, and the worm gear includes a shaft (10) extending into the housing, and an outer rim (12) spaced from the shaft by a gear wall, as in claim 4, wherein the spring is a helical spring located between the tubular mount and the rim on the worm gear (figure 2), as in claim 5, and where the worm, the worm gear and the spring are located within the housing (figure 6), as in claim 35, wherein the spring is a helical spring located between the tubular mount and the rim on the worm gear (paragraph 19), as in claim 37, as well as the camshaft depends from a center point of the cam (figures 1 and 2) so that the cam is mounted to the worm gear, the two are coaxial (figures 1 and 2), as in claim 15. However, Nelsen et al. do not disclose the specifics of the housing.

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Erices et al. teaches motor actuated latch release device having a housing (1, 11, 13 and 22) that includes a recessed region (11) and a tubular mount (12') extending from the center of the recessed region, where the tubular mount includes an open end (12') facing towards the worm gear, where the housing comprises an injection molded plastic tubular mount (12') extending in to the housing interior, with the gear being rotatably mounted thereon, as in claim 26, and the housing having a first stop and a second stop unitarily molded therewith, and the gear includes a first stop and a second stop (column 8, lines 30-37), wherein when the gear is in the first position, the first stops are in mutual abutment to preclude rotation in the second direction, and when the gear is in the second position, the second stops are in mutual abutment to preclude rotation in the first direction, as in claims 6, 27, and 38, further having an injection-molded closure plate (13), and the housing includes a hollow portion (14) and the housing and plate have opposing walls shaped to abut a housing of the motor when the hollow portion and the plate are secured together, and the plate further includes protrusions which extend into the housing interior to abut sides of the motor housing to preclude movement therepast (column 7, lines 36-41), as in claims 7, 28, and 39, wherein the hollow portion includes an upstanding peripheral ridge (figure 1) unitarily molded therewith, and shaped to abut an inner surface of the plate, and the plate of the housing includes an upstanding peripheral ridge unitarily molded therewith and shaped to abut an inner surface of the housing, to protect against the egress of water into the interior of the housing, and wherein the ridges are located to provide a water flow path around the outer periphery thereof (column 3, lines 41-52), as in claims 8 and 29, and further comprising electrically conductive contacts embedded into the housing as the housing is molded (column 7, lines 47-50), in electrical contact with the motor, and extending to the exterior of the housing for

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connection to an electric power supply, as in claims 12 and 33, as well as the housing and the closure plate having a plurality of holes (column 9, lines 41-43) in communication with each other and located to permit simultaneous fastening of the housing and closure plate together and fastening of the device adjacent the latch with the cam in operable proximity thereto, as in claims 13 and 34, in the same field of endeavor for the purpose of sealing the electric drive against moisture by encapsulation of all the components with an electric function in a plastic housing (column 4, lines 34-39). It would have been obvious to one with ordinary skill in the art at the time the invention was made to utilize the housing as taught by Erices et al. in the latching assembly of Nelsen et al. in order to seal the electric drive against moisture by encapsulation of all the components in a plastic housing.

Nelsen et al. further disclose the gear is rotatably mounted therein by means of a shaft (10) extending from the gear that is received in the open end, the gear including a rim (6) spaced from the shaft, and the spring is located between the rim and the housing (figure 2), as in claim 30, and the housing includes an aperture (where element 10 engages with the housing) in communication with the central aperture of the gear, to permit passage of the camshaft therethrough, and wherein the distal end of the camshaft includes at least one resilient finger (furcated ends of the shaft, figure 2) received through the communicating apertures and having a surface in abutting contact with an opposing surface of the gear to preclude axial withdrawal of the camshaft from the wheel aperture, as in claims 10, 31, and 40, and where the cam surface for engaging a latch (1 and 2) is oriented to move the latch in a direction having a vectorial component non-parallel to the direction of rotation of the gear shaft as the gear rotates in the first direction (paragraphs 23-26), as in claims 11 and 32.

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Nelsen et al. additionally disclose the worm gear includes a catch (9) for retaining a first end of the spring, as in claims 21 and 43, wherein the catch includes an overhanging portion (portion of element 9 that retains the spring) operable to retain the spring during the assembly of the latch release device (figure 2), as in claim 22, wherein one of the first and second stops (12) formed in the housing is adapted to retain a second end of the spring (paragraph 19, lines 7-11), as in claims 23 and 44.

Allowable Subject Matter

Claims 16-19 and 41-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The claims are allowable over the prior art of record because the teachings of the references taken as a whole do not teach or render obvious the combination set forth, including that of having a resilient finger extending from the camshaft and being in contact with a gear that faces away from the cam.

Response to Arguments

Applicant's arguments, filed January 30, 2006, with respect to the rejection(s) of claim(s) 1, 4-8, and 10-44 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art references.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Boswell whose telephone number is (571) 272-7054. The examiner can normally be reached on 9:00 - 4:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on (571) 272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CJB CB
April 13, 2006


Suzanne Dino Barrett
Primary Examiner